

Abstract

A chemical mechanical polishing apparatus includes a platen to support a polishing pad, and a polishing head to hold a substrate against the polishing pad during processing. The substrate includes a thin film structure disposed on a wafer. A first optical system includes a first light source to generate a first light beam which impinges on a surface of the substrate, and a first sensor to measure light reflected from the surface of the substrate to generate a measured first interference signal. A second optical system includes a second light source to generate a second light beam which impinges on a surface of the substrate and a second sensor to measure light reflected from the surface of the substrate to generate a measured second interference signal. The second light beam has a wavelength different from the first light beam.

99790.PAL1